

We claim:

1. A multicoat system on a substrate, comprising at least one  
5 radiation-curable coating system (F) and at least one elastic  
intercoat (D) which is located between substrate and  
radiation-curable coating system (F) and has a glass  
transition temperature ( $T_g$ ) of -20°C or less (measured in the  
frequency range up to 1000 Hz).
- 10 2. A multicoat system as claimed in claim 1, composed of
  - (F) at least one radiation-curable coating system,
  - 15 (E) if desired, at least one coat which is pigmented and/or  
provided with effect substances,
  - (D) at least one elastic intercoat (D) having a glass  
transition temperature ( $T_g$ ) of -20°C or less,
- 20 (C) if desired, at least one coat selected from the group  
consisting of primer, basecoat, undercoat, coat pigmented  
or provided with effect substances, and substrate 2,
- 25 (B) if desired, at least one elastic intercoat, if coat (C)  
is a substrate 2, and
  - (A) substrate 1.
- 30 3. A multicoat system as claimed in claim 1 or 2, wherein the  
substrates 1 and/or 2 in the coats (A) and/or (C) are  
selected from the group consisting of paper, plastics, and  
metals.
- 35 4. A multicoat system as claimed in claim 1 or 2, wherein the  
substrates are selected from the group consisting of PP  
(polypropylene), SAN (styrene-acrylonitrile copolymers), PC,  
PMMA, PBT, PA, ASA (acrylonitrile-styrene-acrylate  
copolymers) and ABS (acrylonitrile-butadiene-styrene-  
40 copolymers) and also their physical mixtures (blends).
5. A multicoat system as claimed in any of the above claims,  
wherein the thickness of the elastic intercoat (D) is from  
0.5 to 500  $\mu\text{m}$ .

6. A multicoat system as claimed in any of the above claims, wherein at least one compound in the elastic intercoat (D) is selected from the group consisting of thermoplastic elastomers, polyacrylates, and poly-iso-butenes.  
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7. A multicoat system as claimed in claim 6, wherein at least one compound in the elastic intercoat (D) is selected from the group consisting of styrene-butadiene-styrene (SBS), styrene-isoprene-styrene (SIS), styrene-ethylene/butylene-styrene (SEBS) and styrene-ethylene/propylene-styrene (SEPS) block polymers.  
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8. A substrate coated with a multicoat system as claimed in any of the above claims.  
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9. A method of coating a substrate with at least one radiation-curable coating system (F), which comprises applying, between the substrate and said at least one radiation-curable coating system (F), an elastic intercoat (D) having a glass transition temperature ( $T_g$ ) of  $-20^{\circ}\text{C}$  or less.  
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10. The use of a multicoat system as claimed in any of claims 1 to 7 for the coating of buildings or parts of buildings, interior coatings or coatings on vehicles and aircraft.  
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